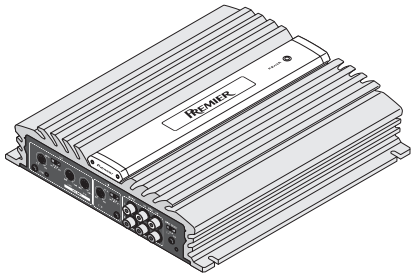
Service Manual

Pioneer

GM-X434/X1R/UC



ORDER NO.
CRT2358

BRIDGEABLE FOUR-CHANNEL POWER AMPLIFIER

GM-X434

X1R/UC

GM-X334

X1R/UC,EW,ES

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1. SAFETY INFORMATION

● **GM-X434/X1R/UC, GM-X334/X1R/UC**

CAUTION

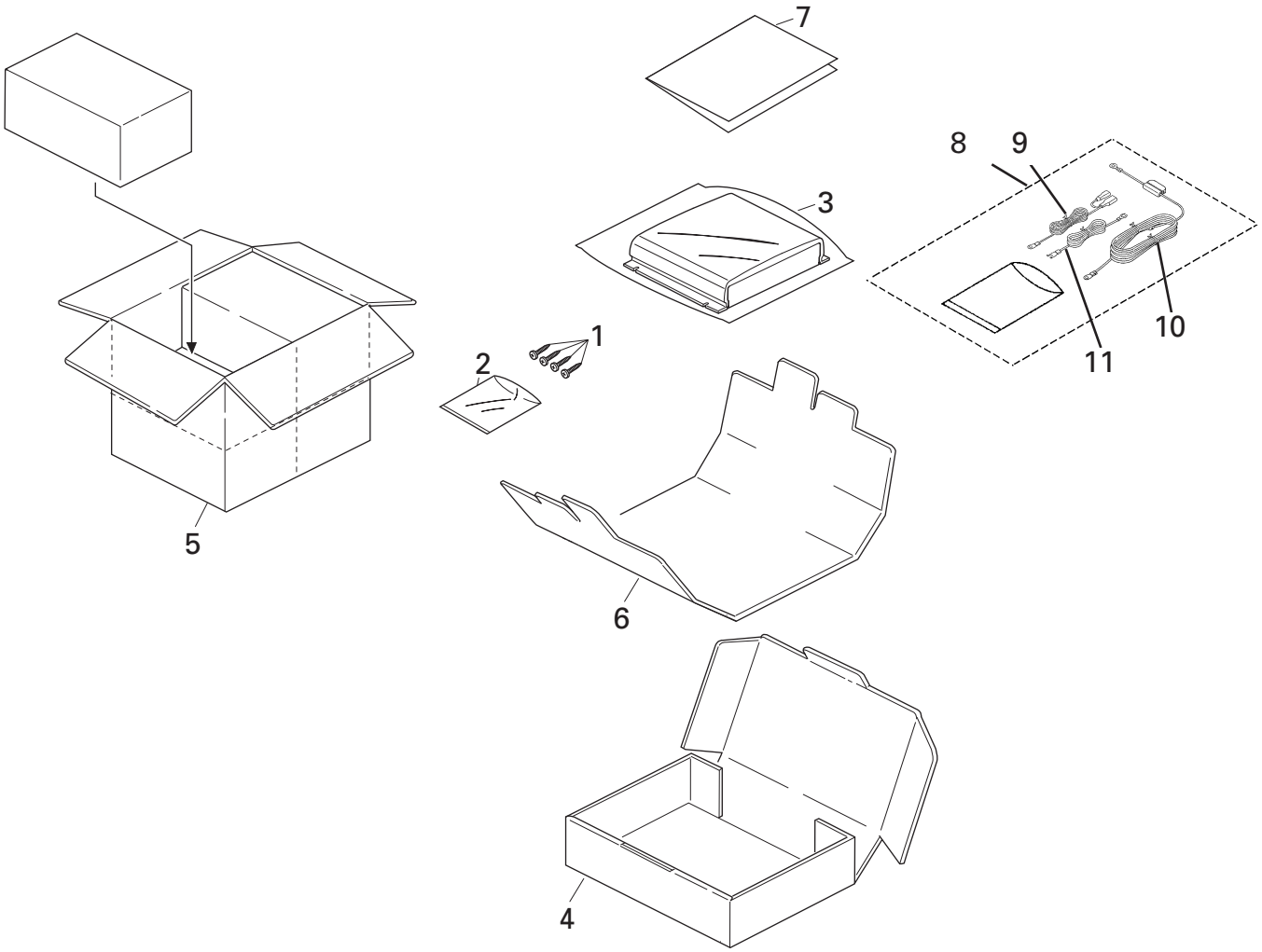
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING



NOTE:

● Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.

● Screws adjacent to ∇ mark on the product are used for disassembly.

(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BYC40P180FZK
	2	Polyethylene Bag	HEG0011
	3	Polyethylene Bag	HEG0009
	4	Carton	See Contrast table(2)
	5	Contain Box	See Contrast table(2)
	6	Protector	HHP0047
	7-1	Owner's Manual	See Contrast table(2)
	7-2	Owner's Manual	See Contrast table(2)
*	7-3	Warranty Card	See Contrast table(2)
*	7-4	Card	See Contrast table(2)
*	7-5	PRC	See Contrast table(2)
	8	Cord Assy	See Contrast table(2)
	9	Cord(Remote)	See Contrast table(2)
	10	Cord(Power)	See Contrast table(2)
	11	Cord(Ground)	See Contrast table(2)

(2) CONTRAST TABLE

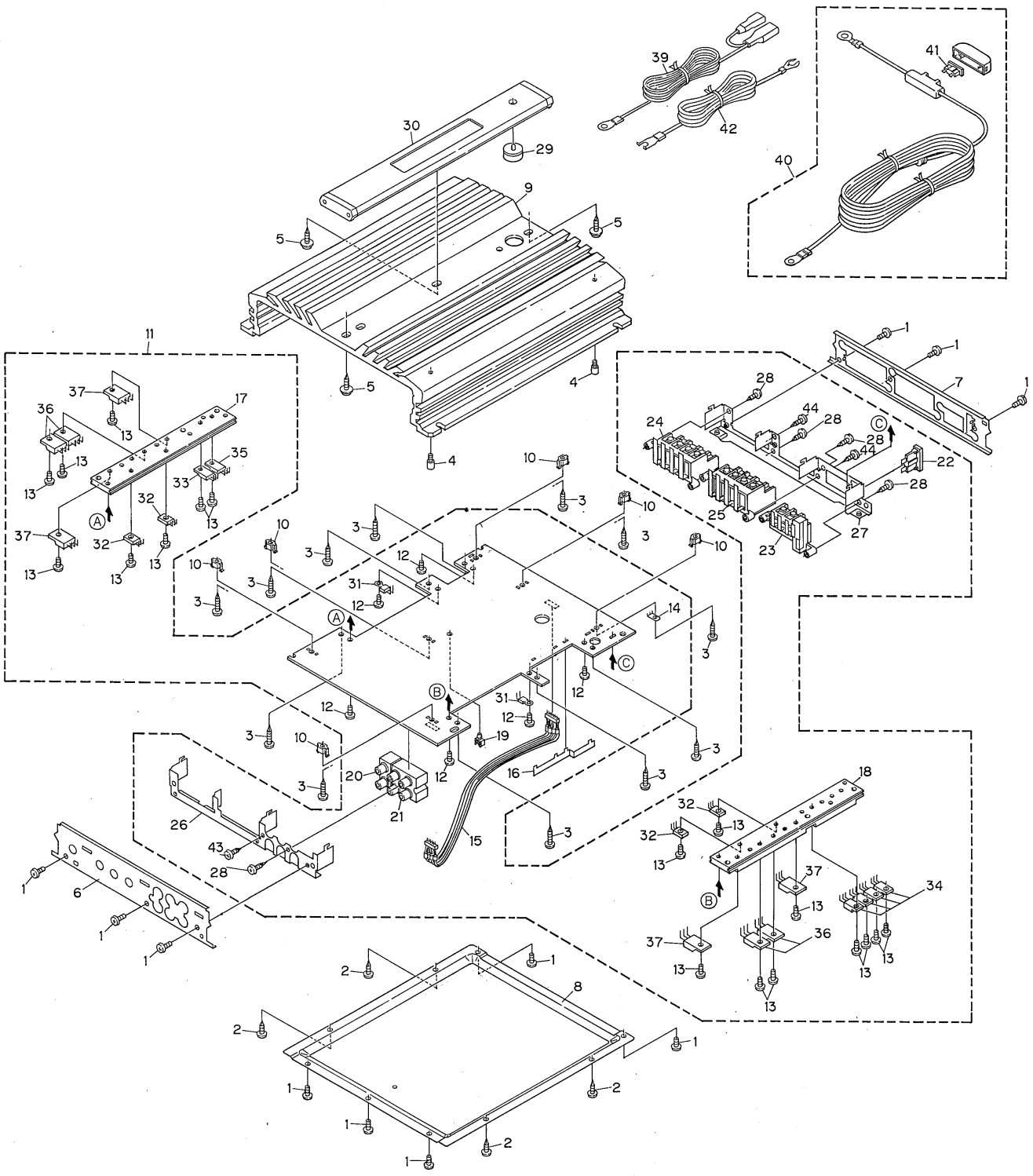
GM-X434/X1R/UC, GM-X334/X1R/UC, GM-X334/X1R/EW and GM-X334/X1R/ES are constructed the same except for the following:

			Part No.			
Mark	No.	Symbol and Description	GM-X434/X1R/UC	GM-X334/X1R/UC	GM-X334/X1R/EW	GM-X334/X1R/ES
	4	Carton	HHG0176	HHG0175	HHG0177	HHG0178
	5	Contain Box	HHL0176	HHL0175	HHL0177	HHL0178
	7-1	Owner's Manual	HRD0075	HRD0074	HRD0076	HRD0077
	7-2	Owner's Manual	Not used	Not used	Not used	HRD0078
*	7-3	Warranty Card	HRY1070	Not used	HRY1087	Not used
*	7-4	Card	Not used	ARY1048	Not used	Not used
*	7-5	PRC	HRY0007	HRY0007	Not used	Not used
	8	Cord Assy	Not used	Not used	HDW0004	HDW0004
	9	Cord(Remote)	Not used	Not used	HDE0007	HDE0007
	10	Cord(Power)	Not used	Not used	HDE4423	HDE4423
	11	Cord(Ground)	Not used	Not used	HDE4455	HDE4455

● **Owner's Manual**

Model	Part No.	Language
GM-X434/X1R/UC	HRD0075	English, French
GM-X334/X1R/UC	HRD0074	English, French
GM-X334/X1R/EW	HRD0076	English, Spanish, German, French, Italian, Dutch
GM-X334/X1R/ES	HRD0077	English, Spanish
	HRD0078	Portuguese(B), Arabic

2.2 EXTERIOR



(1) EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BSZ30P050FZK
2	Screw(M3×6)	CBA1320
3	Screw(M3×12)	CBA1323
4	Screw(M3×5)	HBA0006
5	Screw(M2.6×8)	HBA1462
6	Panel	See Contrast table(2)
7	Panel	See Contrast table(2)
8	Lower Case	HNB2416
9	Heat Sink	See Contrast table(2)
10	Spacer	HNV3975
11	Amp Unit	See Contrast table(2)
12	Screw	BMS30P060FZK
13	Screw	BMS30P080FMC
14	Terminal(CN902)	CKF1059
15	Cord(CN831)	See Contrast table(2)
16	Buss Bar	HNC8121
17	Sub Heat Sink	HNR1521
18	Sub Heat Sink	HNR1522
19	Clamper	See Contrast table(2)
20	Pin Jack(CN802)	See Contrast table(2)
21	Pin Jack(CN801)	See Contrast table(2)
22	Fuse(25A)	HEK0025
23	Terminal(CN901)	See Contrast table(2)
24	Terminal(CN151)	See Contrast table(2)
25	Terminal(CN833)	See Contrast table(2)
26	Holder	HNC8117
27	Holder	HNC8119
28	Screw	PPZ30P060FZK
29	Light Pipe Unit	HXB3450
30	Plate Unit	See Contrast table(2)
31	Thermistor(TH951, 952)	CCX1013
32	Transistor(Q154, 254, 354, 454)	2SD2343
33	Diode(D957)	FML22R
34	FET(Q956, 957, 958, 959)	IRFIZ44N
35	Diode(D956)	FML22S
36	Transistor(Q155, 255, 355, 455)	2SD2438
37	Transistor(Q156, 256, 356, 456)	2SB1587
38	•••••	
39	Cord	See Contrast table(2)
40	Cord	See Contrast table(2)
41	Fuse(30A)	See Contrast table(2)
42	Cord	See Contrast table(2)
43	Screw	See Contrast table(2)
44	Screw	See Contrast table(2)

(2) CONTRAST TABLE

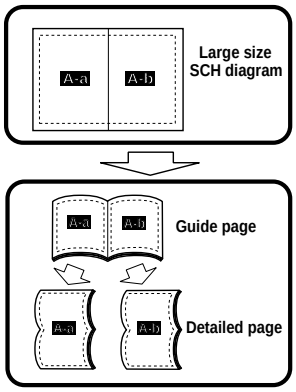
GM-X434/X1R/UC, GM-X334/X1R/UC, GM-X334/X1R/EW and GM-X334/X1R/ES are constructed the same except for the following:

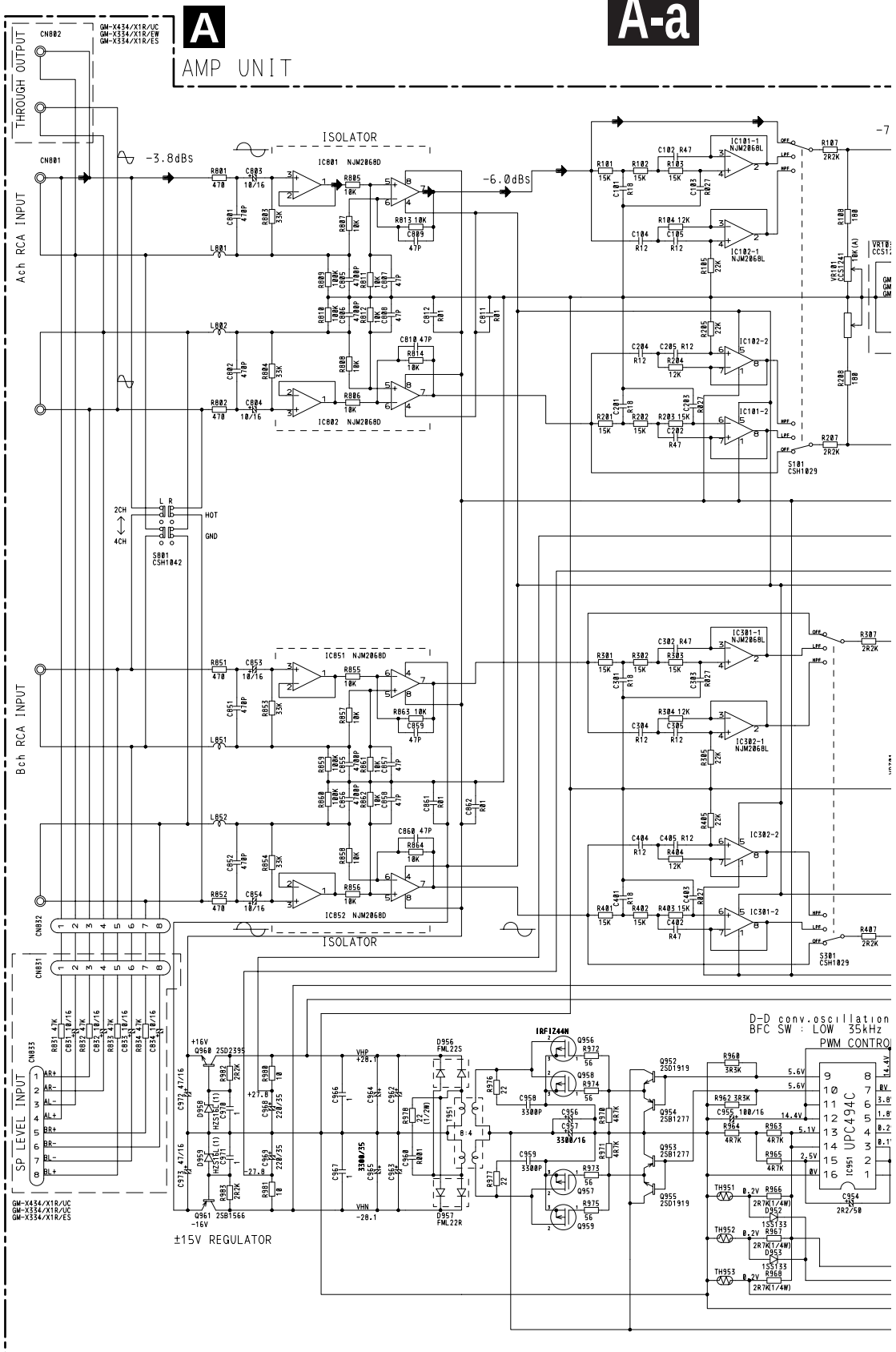
Mark No.	Symbol and Description	Part No.			
		GM-X434/X1R/UC	GM-X334/X1R/UC	GM-X334/X1R/EW	GM-X334/X1R/ES
6	Panel	HNB2409	HNB2408	HNB2403	HNB2403
7	Panel	HNB2415	HNB2410	HNB2413	HNB2410
9	Heat Sink	HNR1514	HNR1512	HNR1512	HNR1512
11	Amp Unit	HWH0082	HWH0081	HWH0079	HWH0080
15	Cord(CN831)	HDE5817	HDE5817	Not used	HDE5817
19	Clamper	HNV0003	HNV0003	Not used	HNV0003
20	Pin Jack(CN802)	CKB1013	Not used	CKB1011	CKB1011
21	Pin Jack(CN801)	CKB1020	CKB1019	CKB1019	CKB1019
23	Terminal(CN901)	HKE0002	HKE0001	HKE0001	HKE0001
24	Terminal(CN151)	HKE0022	HKE0023	HKE0023	HKE0023
25	Terminal(CN833)	HKE0027	HKE0026	Not used	HKE0026
30	Plate Unit	HXB3553	HXB3552	HXB3552	HXB3552
39	Cord	Not used	Not used	HDE0007	HDE0007
40	Cord	Not used	Not used	HDE4423	HDE4423
41	Fuse(30A)	Not used	Not used	HEK0030	HEK0030
42	Cord	Not used	Not used	HDE4455	HDE4455
43	Screw	PPZ30P060FZK	Not used	PPZ30P060FZK	PPZ30P060FZK
44	Screw	PPZ30P060FZK	PPZ30P060FZK	Not used	PPZ30P060FZK

3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to “EXPLODED VIEWS AND PARTS LIST” or “ELECTRICAL PARTS LIST”.

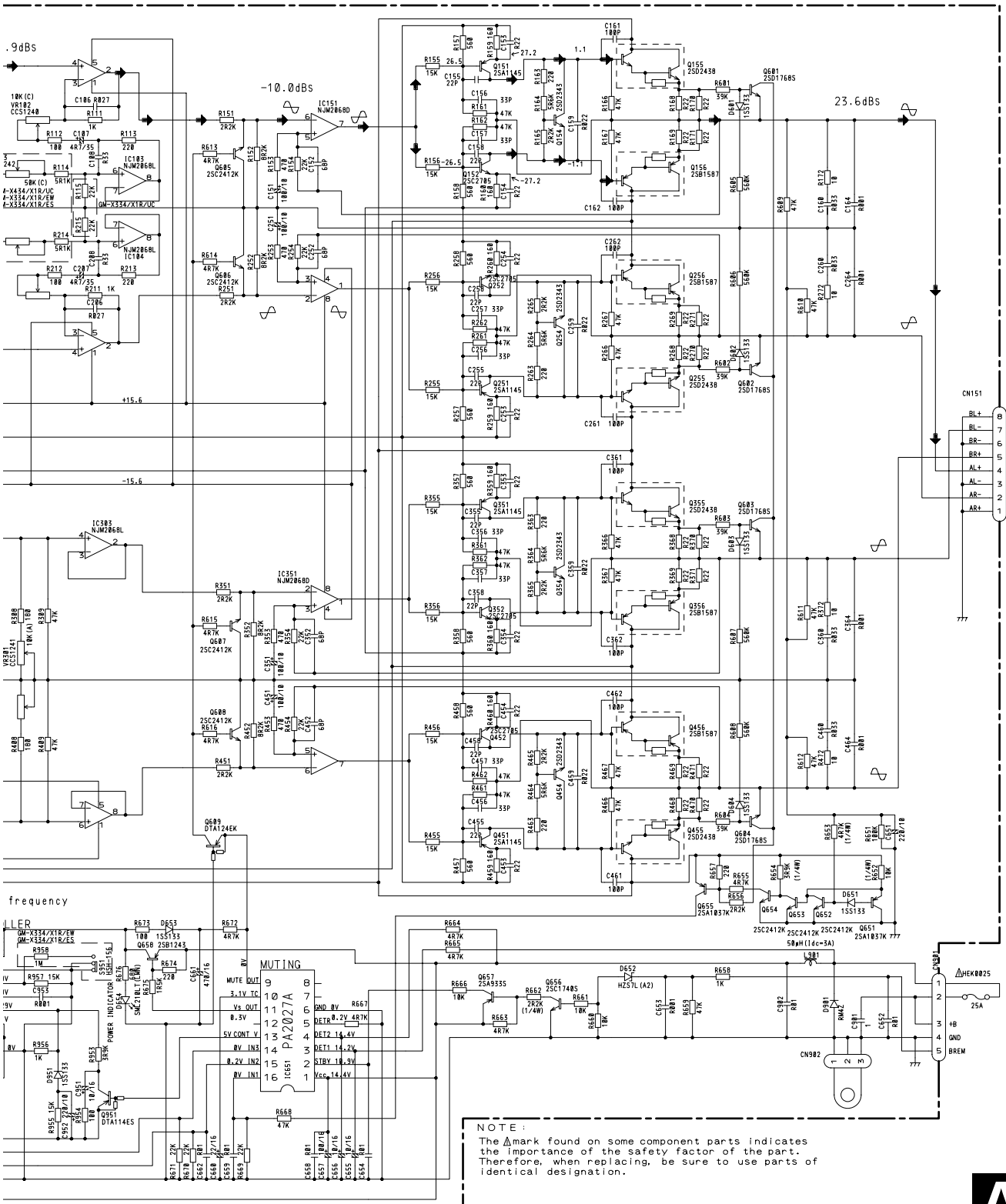




A-b

NOTE:
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022



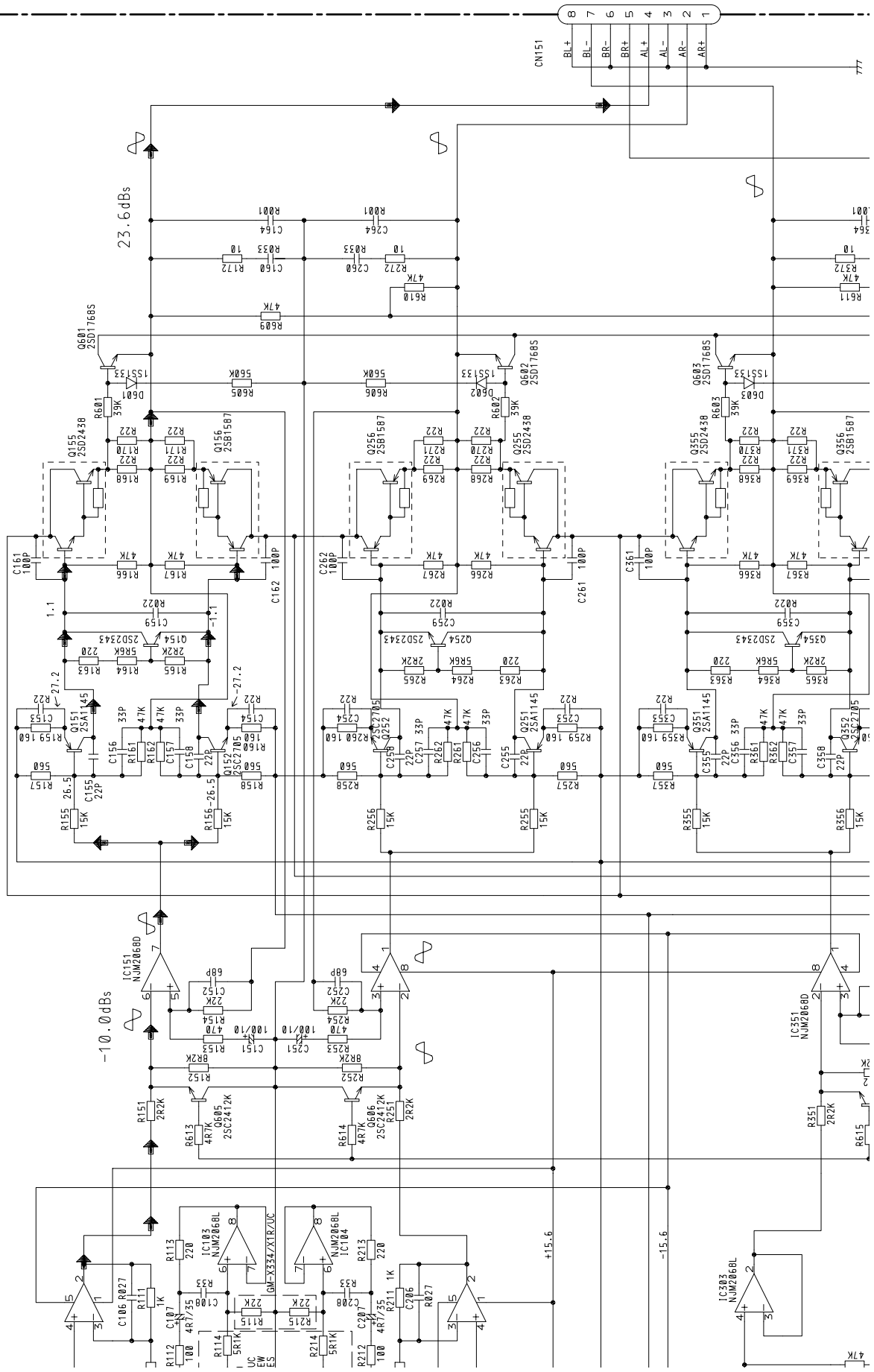
NOTE:
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

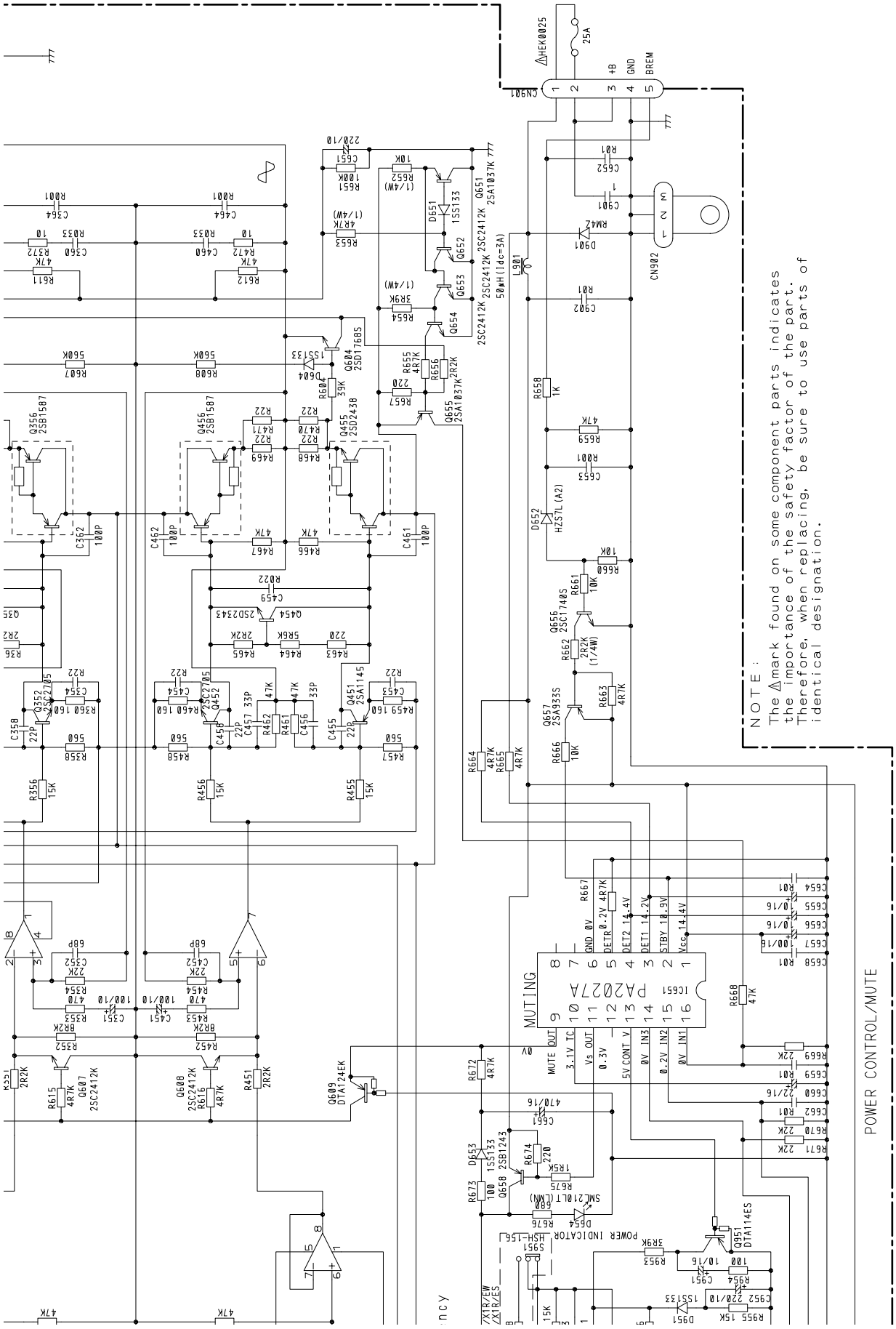
A

A-b
A-a

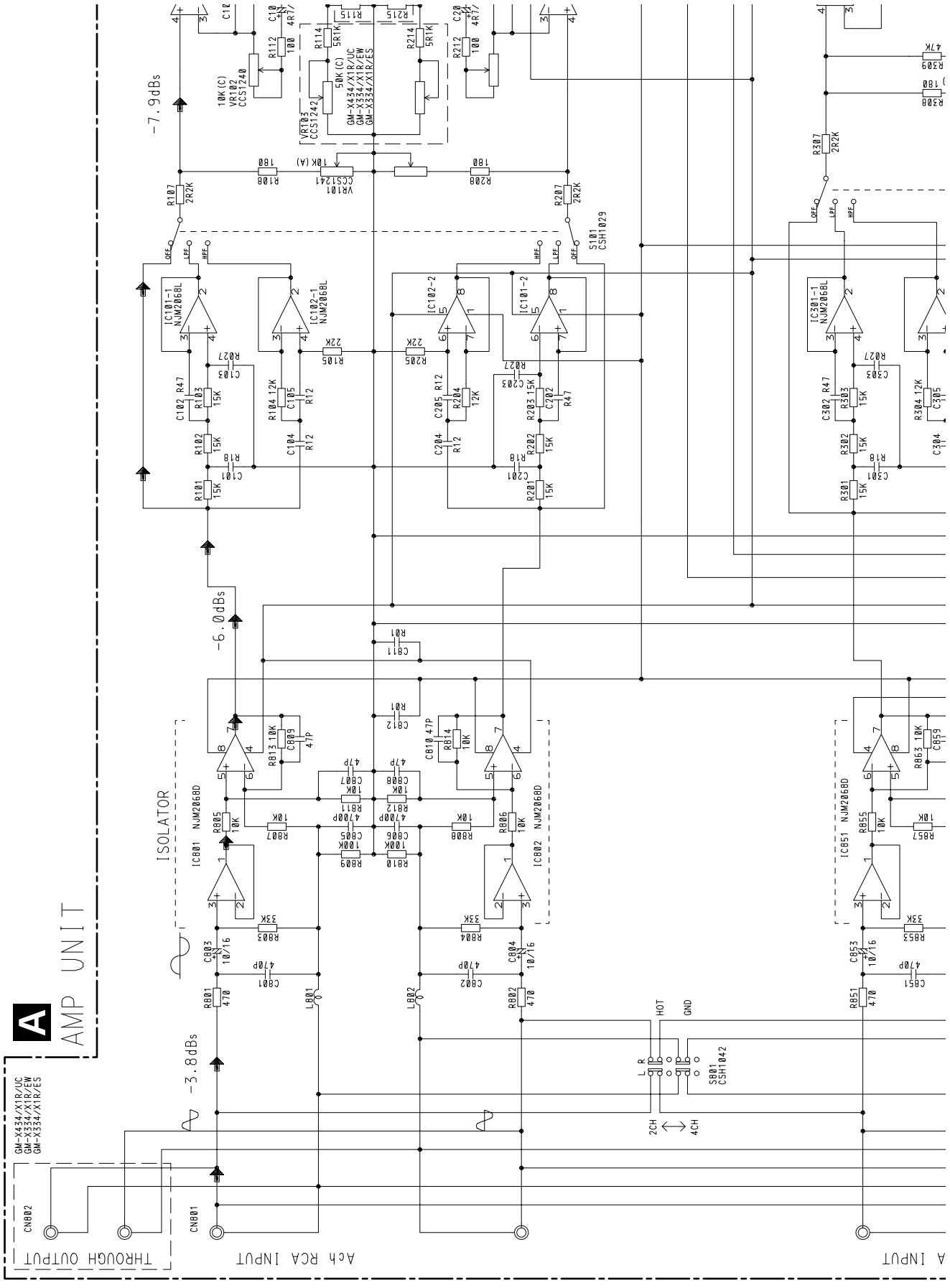
NOTE:
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

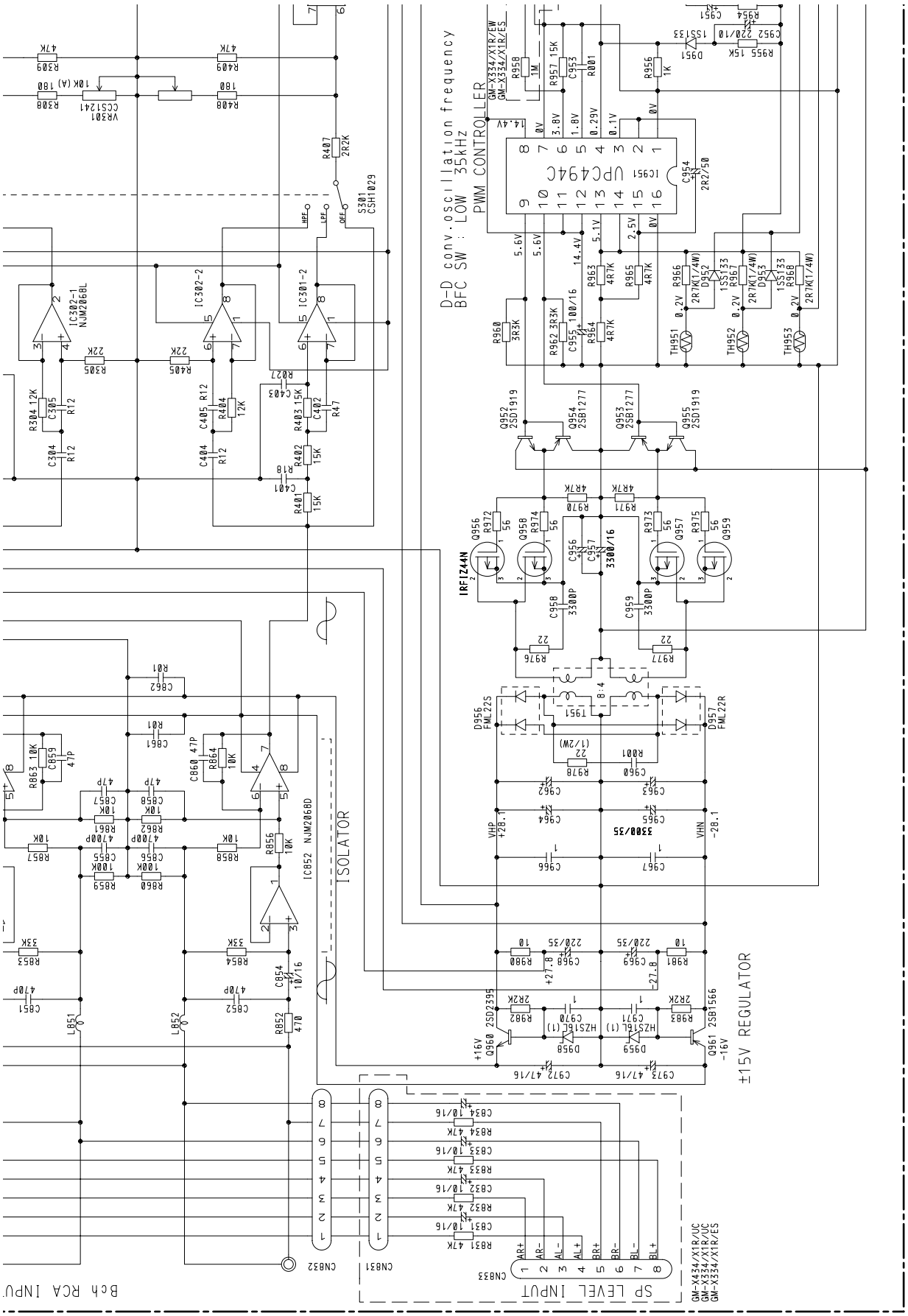
Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022




NOTE:
The △mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
POWER CONTROL/MUTE
MUTING
PA2027A
IC651
CN901
CN902
△HEK0025
25A
+B
GND
BREM
L901
50μH(Idc=3A)
D652
HZS7L(A2)
Q656
2SC1740S
Q657
2SA933S
Q654
2SD1768S
Q655
2SA1037K
Q651
2SA1037K
2SC2412K
Q652
Q653
Q604
Q608
DTA124EK
Q609
DTA124EK
Q607
2SC2412K
Q951
DTA114ES
SW2210LT(LAN)
POWER INDICATOR
S951
SSH-156
MUTE OUT
3.1V TC
Vs OUT
0.3V
5V CONT V
0V IN3
0.2V IN2
0V IN1
GND 0V
DET0 0.2V
DET2 14.4V
DET1 14.2V
STBY 10.9V
Vcc 14.4V
A
B
C
D
A-a
A-b
6

A-b
A-a


A AMP UNIT
ISOLATOR
-7.9dBs
-6.0dBs
-3.8dBs
IC101-1 NJM2068L
IC102-1 NJM2068L
IC102-2
IC101-2
IC301-1 NJM2068L
IC801 NJM2068D
IC802 NJM2068D
IC851 NJM2068D
S101 CSH1029
S801 CSH1042
HOT
GND
L R
2CH ⟷ 4CH
GM-X434/X1R/UC
GM-X334/X1R/EW
GM-X334/X1R/ES
CN802
CN801
THROUGH OUTPUT
A ch RCA INPUT
A INPUT

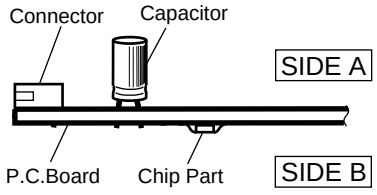

D-D conv.oscillation frequency
BFC SW : LOW 35kHz
PWM CONTROLLER
GM-X334/X1R/EW
GM-X334/X1R/ES
IC951 UPC494C
S301 CSH1029
IC301-1 IC302-1 IC302-2 NJM2068L
IRFIZ44N
3300/16
ISOLATOR
IC852 NJM2068D
±15V REGULATOR
+16V
-16V
VHP +28.1
VHN -28.1
SP LEVEL INPUT
Bch RCA INPUT
CN832
CN831
CN833
GM-X434/X1R/UC
GM-X334/X1R/UC
GM-X334/X1R/ES

4. PCB CONNECTION DIAGRAM

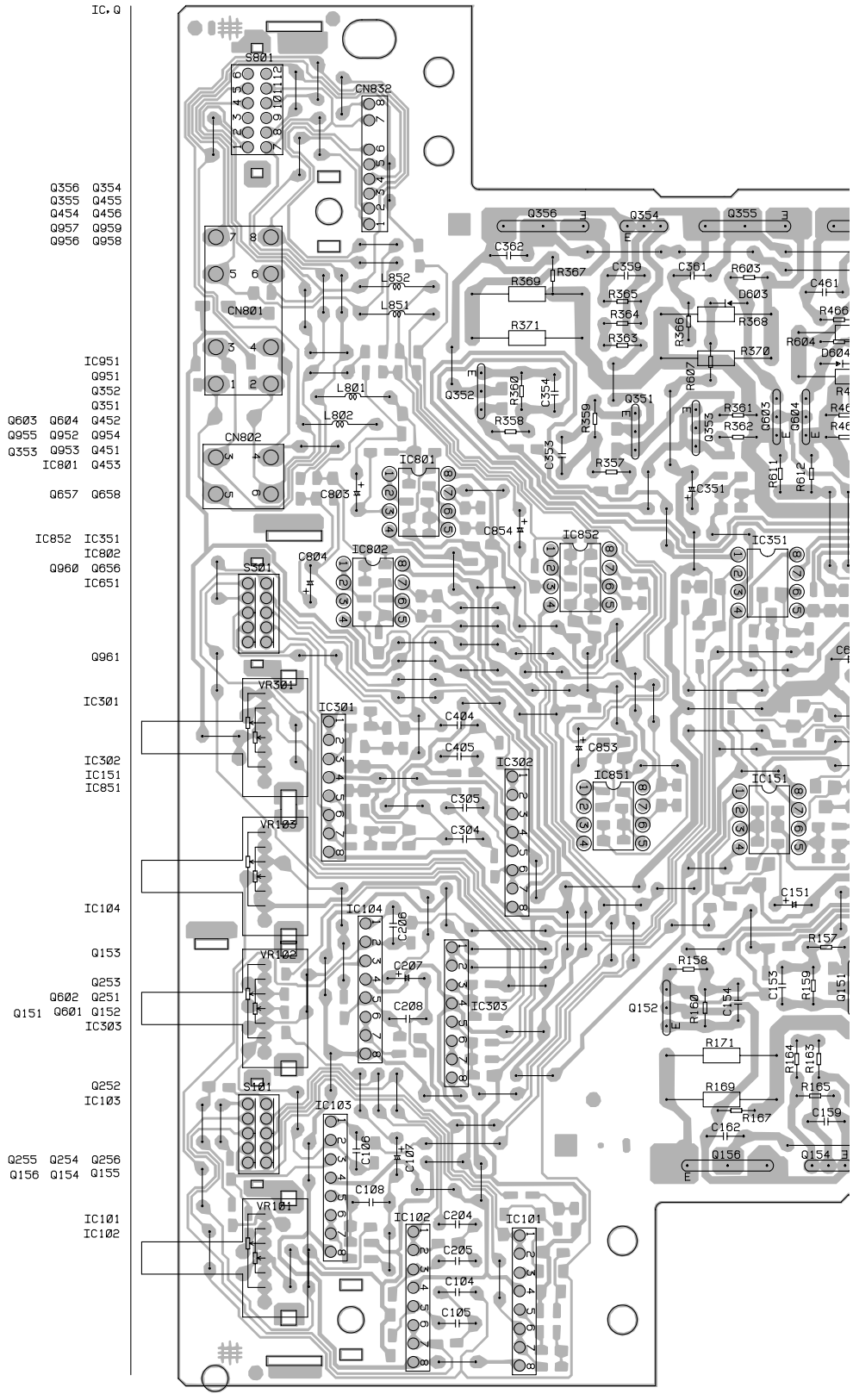
4.1 AMP UNIT

NOTE FOR PCB DIAGRAMS

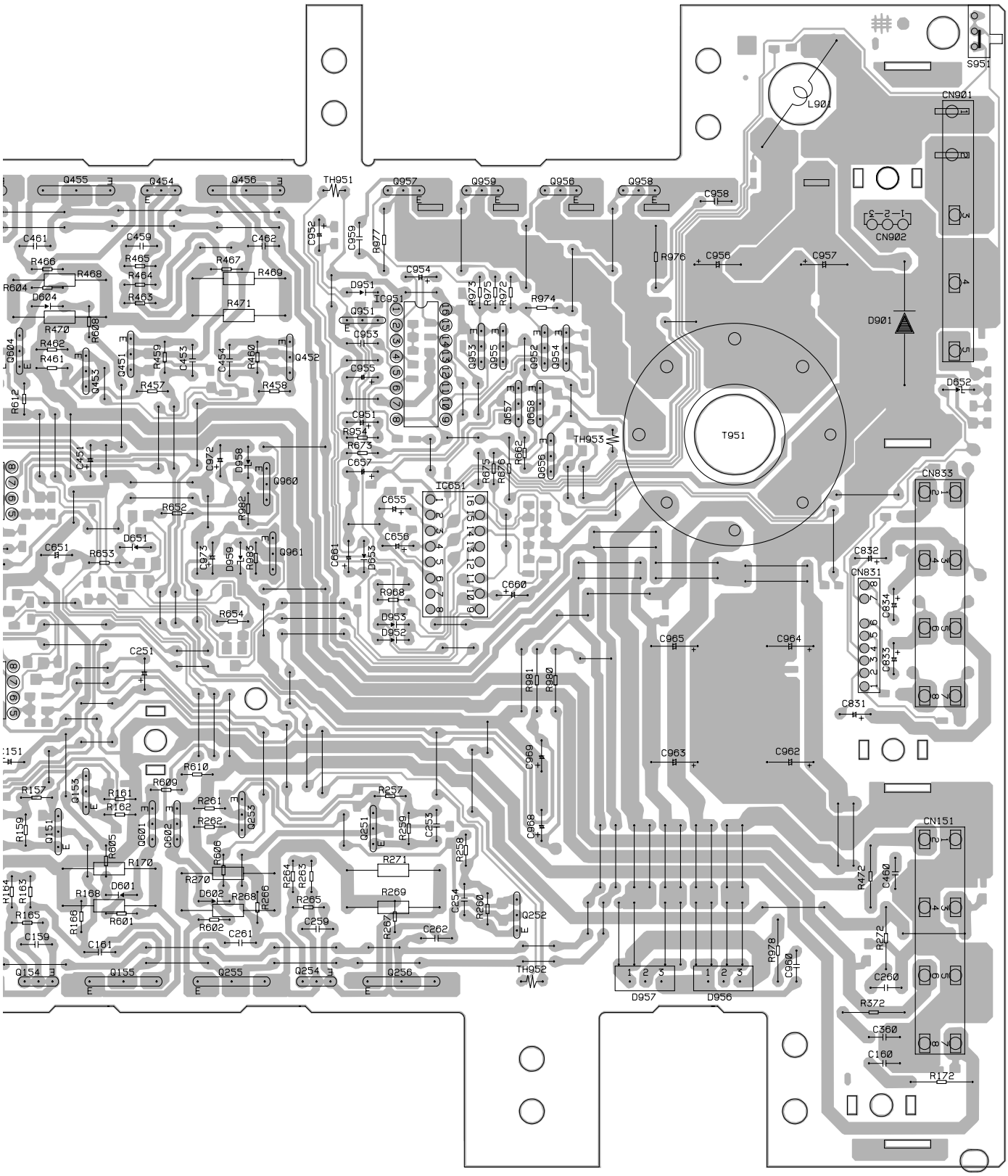
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



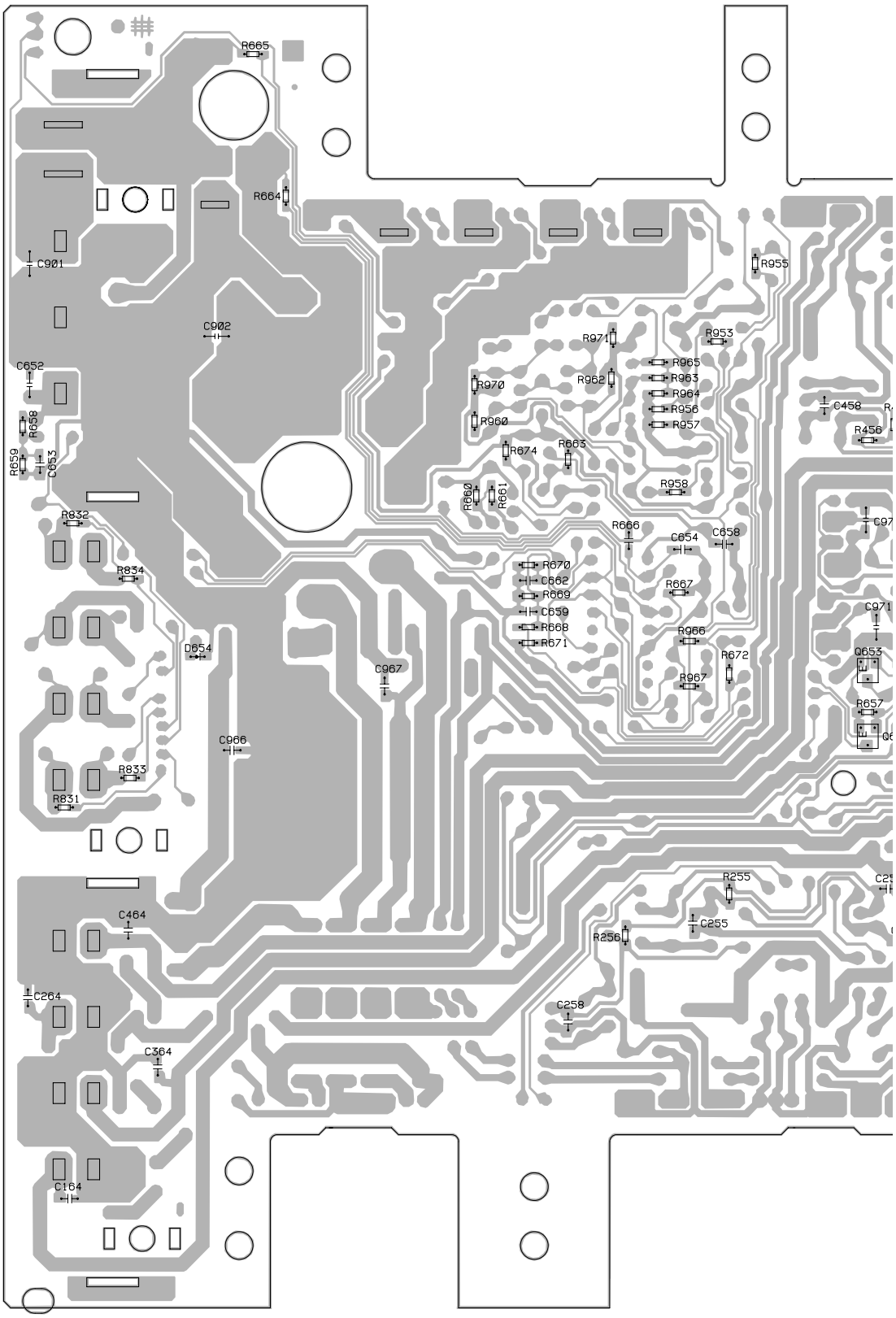
A AMP UNIT



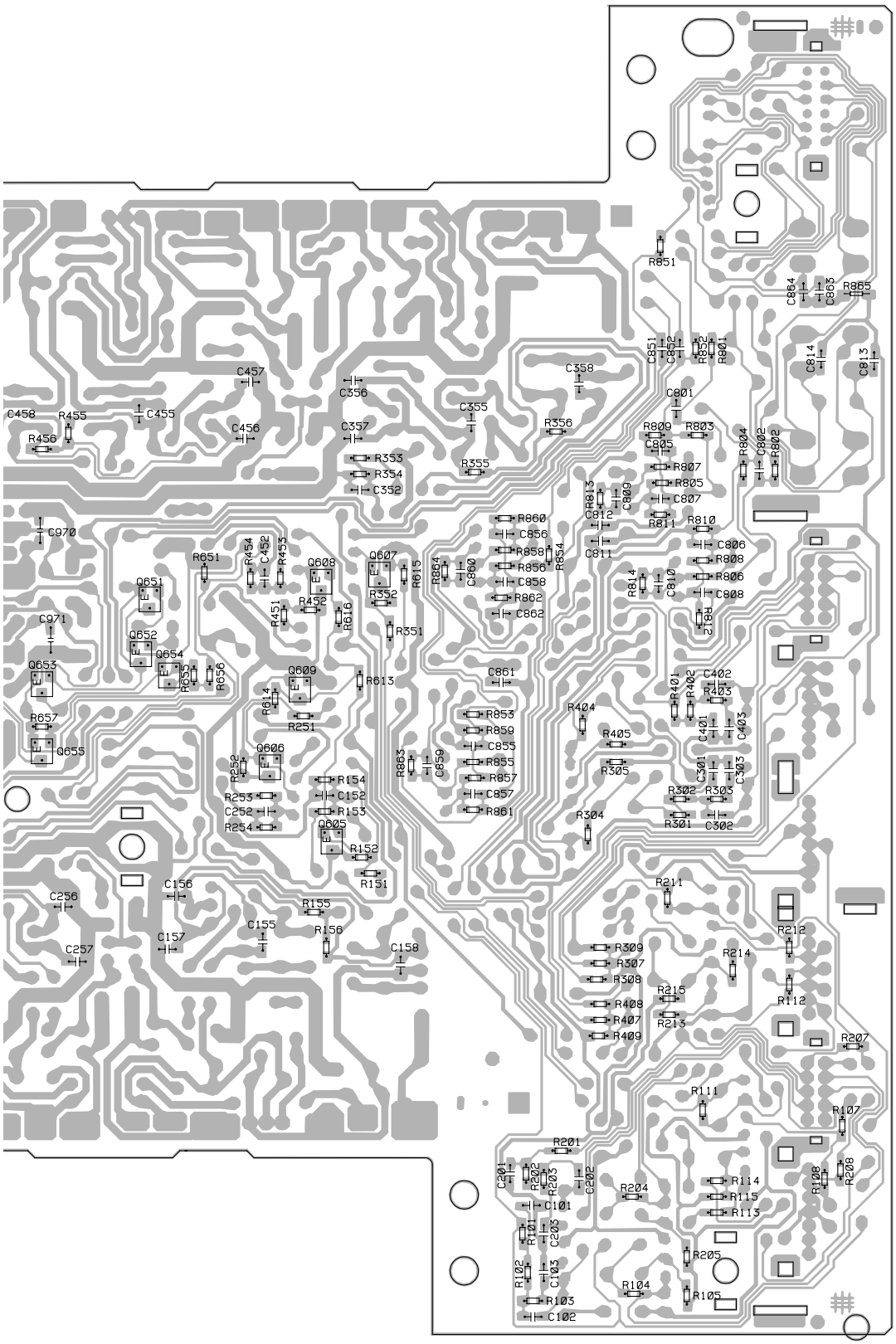
SIDE A


S951
L901
CN901
CN902
D901
T951
TH951
TH952
TH953
CN833
CN831
CN151
D957
D956
IC651
IC951

A AMP UNIT


R665
R664
C901
C902
C652
R658
R659
C663
R832
R834
D654
C967
C966
R833
R831
C464
C264
C364
C164
R955
R971
R953
R965
R962
R963
R970
R964
R956
R960
R957
C458
R456
R674
R663
R958
R660
R661
R666
C654
C658
R670
C662
R669
C659
R668
R671
R667
R966
R672
R967
C971
Q653
R657
R255
C255
R256
C258

SIDE B



5. ELECTRICAL PARTS LIST

NOTES:

● Parts whose parts numbers are omitted are subject to being not supplied.

● The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

A Unit Number : HWH0082(GM-X434/X1R/UC)
Unit Number : HWH0081(GM-X334/X1R/UC)
Unit Number : HWH0079(GM-X334/X1R/EW)
Unit Number : HWH0080(GM-X334/X1R/ES)
Unit Name : Amp Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	NJM2068L
IC	102	IC	NJM2068L
IC	103	IC	NJM2068L
IC	104	IC	NJM2068L
IC	151	IC	NJM2068D
IC	301	IC	NJM2068L
IC	302	IC	NJM2068L
IC	303	IC	NJM2068L
IC	351	IC	NJM2068D
IC	651	IC	PA2027A
IC	801	IC	NJM2068D
IC	802	IC	NJM2068D
IC	851	IC	NJM2068D
IC	852	IC	NJM2068D
IC	951	IC	UPC494C
Q	151	Transistor	2SA1145
Q	152	Transistor	2SC2705
Q	154	Transistor	2SD2343
Q	155	Transistor	2SD2438
Q	156	Transistor	2SB1587
Q	251	Transistor	2SA1145
Q	252	Transistor	2SC2705
Q	254	Transistor	2SD2343
Q	255	Transistor	2SD2438
Q	256	Transistor	2SB1587
Q	351	Transistor	2SA1145
Q	352	Transistor	2SC2705
Q	354	Transistor	2SD2343
Q	355	Transistor	2SD2438
Q	356	Transistor	2SB1587
Q	451	Transistor	2SA1145
Q	452	Transistor	2SC2705
Q	454	Transistor	2SD2343
Q	455	Transistor	2SD2438
Q	456	Transistor	2SB1587
Q	601	Transistor	2SD1768S
Q	602	Transistor	2SD1768S
Q	603	Transistor	2SD1768S
Q	604	Transistor	2SD1768S
Q	605	Transistor	2SC2412K
Q	606	Transistor	2SC2412K
Q	607	Transistor	2SC2412K
Q	608	Transistor	2SC2412K
Q	609	Transistor	DTA124EK
Q	651	Transistor	2SA1037K

=====Circuit Symbol and No.		===Part Name	Part No.
Q	652	Transistor	2SC2412K
Q	653	Transistor	2SC2412K
Q	654	Transistor	2SC2412K
Q	655	Transistor	2SA1037K
Q	656	Transistor	2SC1740S
Q	657	Transistor	2SA933S
Q	658	Transistor	2SB1243
Q	951	Transistor	DTA114ES
Q	952	Transistor	2SD1919
Q	953	Transistor	2SB1277
Q	954	Transistor	2SB1277
Q	955	Transistor	2SD1919
Q	956	FET	IRFIZ44N
Q	957	FET	IRFIZ44N
Q	958	FET	IRFIZ44N
Q	959	FET	IRFIZ44N
Q	960	Transistor	2SD2395
Q	961	Transistor	2SB1566
D	601	Diode	1SS133
D	602	Diode	1SS133
D	603	Diode	1SS133
D	604	Diode	1SS133
D	651	Diode	1SS133
D	652	Diode	HZS7L(A2)
D	653	Diode	1SS133
D	654	LED	SML210LT(LMN)
D	901	Diode	RM4Z
D	951	Diode	1SS133
D	952	Diode	1SS133
D	953	Diode	1SS133
D	956	Diode	FML22S
D	957	Diode	FML22R
D	958	Diode	HZS16L(1)
D	959	Diode	HZS16L(1)
L	801	Ferri-Inductor	CTF1007
L	802	Ferri-Inductor	CTF1007
L	851	Ferri-Inductor	CTF1007
L	852	Ferri-Inductor	CTF1007
L	901	Choke Coil 50μH(Idc=3A)	CTH1218
T	951	Transformer	CTT1090
TH	951	Thermistor	CCX1013
TH	952	Thermistor	CCX1013
TH	953	Thermistor	CCX1035
S	101	Switch(OFF/LPF/MPF)	CSH1029
S	301	Switch(OFF/LPF/MPF)	CSH1029
S	801	Slide Switch(2CH/4CH)	CSH1042
S	951	Switch(BFC)	See Contrast table
VR	101	Volume 10kΩ(A)	CCS1241
VR	102	Volume 10kΩ(C)	CCS1240
VR	103	Volume 50kΩ(C)	See Contrast table
VR	301	Volume 10kΩ(A)	CCS1241
		Fuse 25A	HEK0025

=====Circuit Symbol and No.		===Part Name	Part No.
RESISTORS			
R	101		RS1/10S153J
R	102		RS1/10S153J
R	103		RS1/10S153J
R	104		RS1/10S123J
R	105		RS1/10S223J
R	107		RS1/10S222J
R	108		RS1/10S181J
R	111		RS1/10S102J
R	112		RS1/10S101J
R	113		RS1/10S221J
R	114		See Contrast table
R	115		See Contrast table
R	151		RS1/10S222J
R	152		RS1/10S822J
R	153		RS1/10S471J
R	154		RS1/10S223J
R	155		RS1/10S153J
R	156		RS1/10S153J
R	157		RD1/4PU561J
R	158		RD1/4PU561J
R	159		RD1/4PU161J
R	160		RD1/4PU161J
R	161		RD1/4PU473J
R	162		RD1/4PU473J
R	163		RD1/4PU221J
R	164		RD1/4PU562J
R	165		RD1/4PU222J
R	166		RD1/4PU473J
R	167		RD1/4PU473J
R	168	0.22Ω	CCN1013
R	169	0.22Ω	CCN1013
R	170	0.22Ω	CCN1013
R	171	0.22Ω	CCN1013
R	172		RD1/2PM100J
R	201		RS1/10S153J
R	202		RS1/10S153J
R	203		RS1/10S153J
R	204		RS1/10S123J
R	205		RS1/10S223J
R	207		RS1/10S222J
R	208		RS1/10S181J
R	211		RS1/10S102J
R	212		RS1/10S101J
R	213		RS1/10S221J
R	214		See Contrast table
R	215		See Contrast table
R	251		RS1/10S222J
R	252		RS1/10S822J
R	253		RS1/10S471J
R	254		RS1/10S223J
R	255		RS1/10S153J
R	256		RS1/10S153J
R	257		RD1/4PU561J
R	258		RD1/4PU561J
R	259		RD1/4PU161J
R	260		RD1/4PU161J
R	261		RD1/4PU473J
R	262		RD1/4PU473J
R	263		RD1/4PU221J
R	264		RD1/4PU562J
R	265		RD1/4PU222J
R	266		RD1/4PU473J
R	267		RD1/4PU473J
R	268	0.22Ω	CCN1013
R	269	0.22Ω	CCN1013
R	270	0.22Ω	CCN1013
R	271	0.22Ω	CCN1013
R	272		RD1/2PM100J
R	301		RS1/10S153J
R	302		RS1/10S153J
R	303		RS1/10S153J
R	304		RS1/10S123J
R	305		RS1/10S223J
R	307		RS1/10S222J
R	308		RS1/10S181J
R	309		RS1/10S473J
R	351		RS1/10S222J
R	352		RS1/10S822J
R	353		RS1/10S471J
R	354		RS1/10S223J
R	355		RS1/10S153J
R	356		RS1/10S153J
R	357		RD1/4PU561J
R	358		RD1/4PU561J
R	359		RD1/4PU161J
R	360		RD1/4PU161J
R	361		RD1/4PU473J
R	362		RD1/4PU473J
R	363		RD1/4PU221J
R	364		RD1/4PU562J
R	365		RD1/4PU222J
R	366		RD1/4PU473J
R	367		RD1/4PU473J
R	368	0.22Ω	CCN1013
R	369	0.22Ω	CCN1013
R	370	0.22Ω	CCN1013
R	371	0.22Ω	CCN1013
R	372		RD1/2PM100J
R	401		RS1/10S153J
R	402		RS1/10S153J
R	403		RS1/10S153J
R	404		RS1/10S123J
R	405		RS1/10S223J
R	407		RS1/10S222J
R	408		RS1/10S181J
R	409		RS1/10S473J
R	451		RS1/10S222J
R	452		RS1/10S822J
R	453		RS1/10S471J
R	454		RS1/10S223J
R	455		RS1/10S153J
R	456		RS1/10S153J
R	457		RD1/4PU561J
R	458		RD1/4PU561J
R	459		RD1/4PU161J
R	460		RD1/4PU161J
R	461		RD1/4PU473J
R	462		RD1/4PU473J
R	463		RD1/4PU221J
R	464		RD1/4PU562J
R	465		RD1/4PU222J
R	466		RD1/4PU473J
R	467		RD1/4PU473J
R	468	0.22Ω	CCN1013
R	469	0.22Ω	CCN1013
R	470	0.22Ω	CCN1013
R	471	0.22Ω	CCN1013
R	472		RD1/2PM100J
R	601		RD1/4PU393J
R	602		RD1/4PU393J

Circuit Symbol and No.		Part Name	Part No.
R	603		RD1/4PU393J
R	604		RD1/4PU393J
R	605		RD1/4PU564J
R	606		RD1/4PU564J
R	607		RD1/4PU564J
R	608		RD1/4PU564J
R	609		RD1/4PU473J
R	610		RD1/4PU473J
R	611		RD1/4PU473J
R	612		RD1/4PU473J
R	613		RS1/10S472J
R	614		RS1/10S472J
R	615		RS1/10S472J
R	616		RS1/10S472J
R	651		RS1/10S104J
R	652		RD1/4PU103J
R	653		RD1/4PU472J
R	654		RD1/4PU392J
R	655		RS1/10S472J
R	656		RS1/10S222J
R	657		RS1/10S221J
R	658		RS1/10S102J
R	659		RS1/10S473J
R	660		RS1/10S103J
R	661		RS1/10S103J
R	662		RD1/4PU222J
R	663		RS1/10S472J
R	664		RS1/10S472J
R	665		RS1/10S472J
R	666		RS1/10S103J
R	667		RS1/10S472J
R	668		RS1/10S473J
R	669		RS1/10S223J
R	670		RS1/10S223J
R	671		RS1/10S223J
R	672		RS1/10S472J
R	673		RD1/4PU101J
R	674		RS1/10S221J
R	675		RD1/4PU152J
R	676		RD1/2PM681J
R	801		RS1/10S471J
R	802		RS1/10S471J
R	803		RS1/10S333J
R	804		RS1/10S333J
R	805	(RN1/10SE1002D)	GGC1320
R	806	(RN1/10SE1002D)	GGC1320
R	807	(RN1/10SE1002D)	GGC1320
R	808	(RN1/10SE1002D)	GGC1320
R	809		RS1/10S104J
R	810		RS1/10S104J
R	811	(RN1/10SE1002D)	GGC1320
R	812	(RN1/10SE1002D)	GGC1320
R	813	(RN1/10SE1002D)	GGC1320
R	814	(RN1/10SE1002D)	GGC1320
R	831		See Contrast table
R	832		See Contrast table
R	833		See Contrast table
R	834		See Contrast table
R	851		RS1/10S471J
R	852		RS1/10S471J
R	853		RS1/10S333J
R	854		RS1/10S333J
R	855	(RN1/10SE1002D)	GGC1320
R	856	(RN1/10SE1002D)	GGC1320
R	857	(RN1/10SE1002D)	GGC1320

Circuit Symbol and No.		Part Name	Part No.
R	858	(RN1/10SE1002D)	GGC1320
R	859		RS1/10S104J
R	860		RS1/10S104J
R	861	(RN1/10SE1002D)	GGC1320
R	862	(RN1/10SE1002D)	GGC1320
R	863	(RN1/10SE1002D)	GGC1320
R	864	(RN1/10SE1002D)	GGC1320
R	953		RS1/10S392J
R	954		RD1/4PU101J
R	955		RS1/10S153J
R	956		RS1/10S102J
R	957		RS1/10S153J
R	958		See Contrast table
R	960		RS1/10S332J
R	962		RS1/10S332J
R	963		RS1/10S472J
R	964		RS1/10S472J
R	965		RS1/10S472J
R	966		RS1/10S272J
R	967		RS1/10S272J
R	968		RD1/4PU272J
R	970		RS1/10S472J
R	971		RS1/10S472J
R	972		RD1/4PU560J
R	973		RD1/4PU560J
R	974		RD1/4PU560J
R	975		RD1/4PU560J
R	976		RD1/2PM220J
R	977		RD1/2PM220J
R	978		RD1/2PM220J
R	980		RD1/2PM100J
R	981		RD1/2PM100J
R	982		RD1/4PU222J
R	983		RD1/4PU222J

CAPACITORS

C	101	CKSQYB184K16
C	102	CKSQYB474K16
C	103	CKSQYB273K25
C	104	CFTLA124J50
C	105	CFTLA124J50
C	106	CFTLA273J50
C	107	CEAS4R7M35
C	108	CFTLA334J50
C	151	CEAS101M10
C	152	CCSQSL680J50
C	153	CFTLA224J50
C	154	CFTLA224J50
C	155	CCSQCH220J50
C	156	CCSQCH330J50
C	157	CCSQCH330J50
C	158	CCSQCH220J50
C	159	CFTLA223J50
C	160	CFTLA333J50
C	161	CCCSL101J50
C	162	CCCSL101J50
C	164	CKSQYB102K50
C	201	CKSQYB184K16
C	202	CKSQYB474K16
C	203	CKSQYB273K25
C	204	CFTLA124J50
C	205	CFTLA124J50
C	206	CFTLA273J50
C	207	CEAS4R7M35
C	208	CFTLA334J50
C	251	CEAS101M10

=====Circuit Symbol and No.		===Part Name	Part No.
C	252		CCSQSL680J50
C	253		CFTLA224J50
C	254		CFTLA224J50
C	255		CCSQCH220J50
C	256		CCSQCH330J50
C	257		CCSQCH330J50
C	258		CCSQCH220J50
C	259		CFTLA223J50
C	260		CFTLA333J50
C	261		CCCSL101J50
C	262		CCCSL101J50
C	264		CKSQYB102K50
C	301		CKSQYB184K16
C	302		CKSQYB474K16
C	303		CKSQYB273K25
C	304		CFTLA124J50
C	305		CFTLA124J50
C	351		CEAS101M10
C	352		CCSQSL680J50
C	353		CFTLA224J50
C	354		CFTLA224J50
C	355		CCSQCH220J50
C	356		CCSQCH330J50
C	357		CCSQCH330J50
C	358		CCSQCH220J50
C	359		CFTLA223J50
C	360		CFTLA333J50
C	361		CCCSL101J50
C	362		CCCSL101J50
C	364		CKSQYB102K50
C	401		CKSQYB184K16
C	402		CKSQYB474K16
C	403		CKSQYB273K25
C	404		CFTLA124J50
C	405		CFTLA124J50
C	451		CEAS101M10
C	452		CCSQSL680J50
C	453		CFTLA224J50
C	454		CFTLA224J50
C	455		CCSQCH220J50
C	456		CCSQCH330J50
C	457		CCSQCH330J50
C	458		CCSQCH220J50
C	459		CFTLA223J50
C	460		CFTLA333J50
C	461		CCCSL101J50
C	462		CCCSL101J50
C	464		CKSQYB102K50
C	651	220µF/10V	CCH1036
C	652		CKSYB103K50
C	653		CKSQYB102K50
C	654		CKSQYB103K50
C	655		CEAS100M16
C	656		CEAS100M16
C	657		CEAS101M16
C	658		CKSQYB103K50
C	659		CKSQYB103K50
C	660		CEAS220M16
C	661	470µF/16V	CCH1183
C	662		CKSQYB103K50
C	801		CKSQYB471K50
C	802		CKSQYB471K50
C	803		CEAS100M16
C	804		CEAS100M16
C	805		CKSQYB472K50

=====Circuit Symbol and No.		===Part Name	Part No.
C	806		CKSQYB472K50
C	807		CCSQCH470J50
C	808		CCSQCH470J50
C	809		CCSQCH470J50
C	810		CCSQCH470J50
C	811		CKSQYB103K50
C	812		CKSQYB103K50
C	831		See Contrast table
C	832		See Contrast table
C	833		See Contrast table
C	834		See Contrast table
C	851		CKSQYB471K50
C	852		CKSQYB471K50
C	853		CEAS100M16
C	854		CEAS100M16
C	855		CKSQYB472K50
C	856		CKSQYB472K50
C	857		CCSQCH470J50
C	858		CCSQCH470J50
C	859		CCSQCH470J50
C	860		CCSQCH470J50
C	861		CKSQYB103K50
C	862		CKSQYB103K50
C	901		CKSYB105K16
C	902		CKSYB103K50
C	951		CEAS100M16
C	952		CEAS221M10
C	953		CQMA102J50
C	954		CEAS2R2M50
C	955		CEAS101M16
C	956	3300µF/16V	CCH1130
C	957	3300µF/16V	CCH1130
C	958		CQMA332J50
C	959		CQMA332J50
C	960		CQMA102J50
C	962	3300µF/35V	CCH1200
C	963	3300µF/35V	CCH1200
C	964	3300µF/35V	CCH1200
C	965	3300µF/35V	CCH1200
C	966		CKSQYB105K16
C	967		CKSQYB105K16
C	968		CEAT221M35
C	969		CEAT221M35
C	970		CKSYB105K16
C	971		CKSYB105K16
C	972		CEAS470M16
C	973		CEAS470M16

CONTRAST TABLE of AMP UNIT

GM-X434/X1R/UC, GM-X334/X1R/UC, GM-X334/X1R/EW and GM-X334/X1R/ES are constructed the same except for the following:

Symbol and Description	Part No.			
	GM-X434/X1R/UC	GM-X334/X1R/UC	GM-X334/X1R/EW	GM-X334/X1R/ES
S 951 Switch(BFC)	Not used	Not used	HSH-156	HSH-156
VR 103 Volume 50kΩ(C)	CCS1242	Not used	CCS1242	CCS1242
R 114	RS1/10S512J	Not used	RS1/10S512J	RS1/10S512J
R 115	Not used	RS1/10S223J	Not used	Not used
R 214	RS1/10S512J	Not used	RS1/10S512J	RS1/10S512J
R 215	Not used	RS1/10S223J	Not used	Not used
R 831	RS1/10S473J	RS1/10S473J	Not used	RS1/10S473J
R 832	RS1/10S473J	RS1/10S473J	Not used	RS1/10S473J
R 833	RS1/10S473J	RS1/10S473J	Not used	RS1/10S473J
R 834	RS1/10S473J	RS1/10S473J	Not used	RS1/10S473J
R 958	Not used	Not used	RS1/10S105J	RS1/10S105J
C 831	CEAS100M16	CEAS100M16	Not used	CEAS100M16
C 832	CEAS100M16	CEAS100M16	Not used	CEAS100M16
C 833	CEAS100M16	CEAS100M16	Not used	CEAS100M16
C 834	CEAS100M16	CEAS100M16	Not used	CEAS100M16

6. ADJUSTMENT

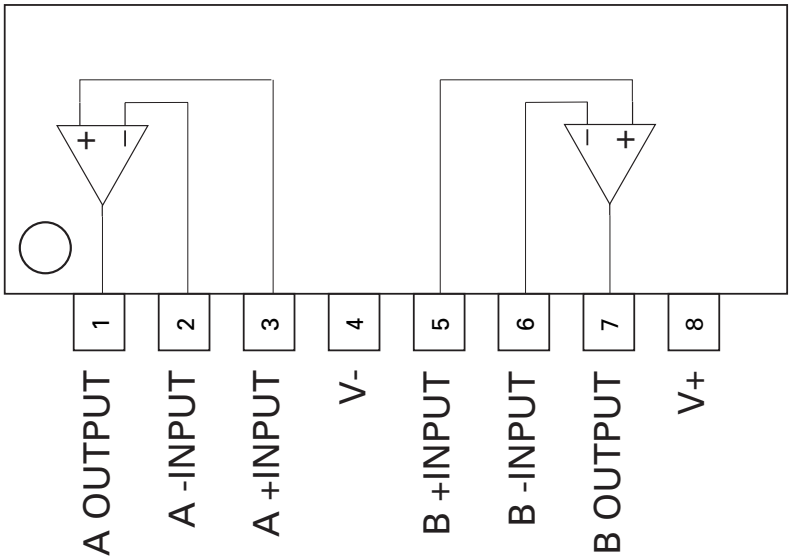
There is no information to be shown in this chapter.

7. GENERAL INFORMATION

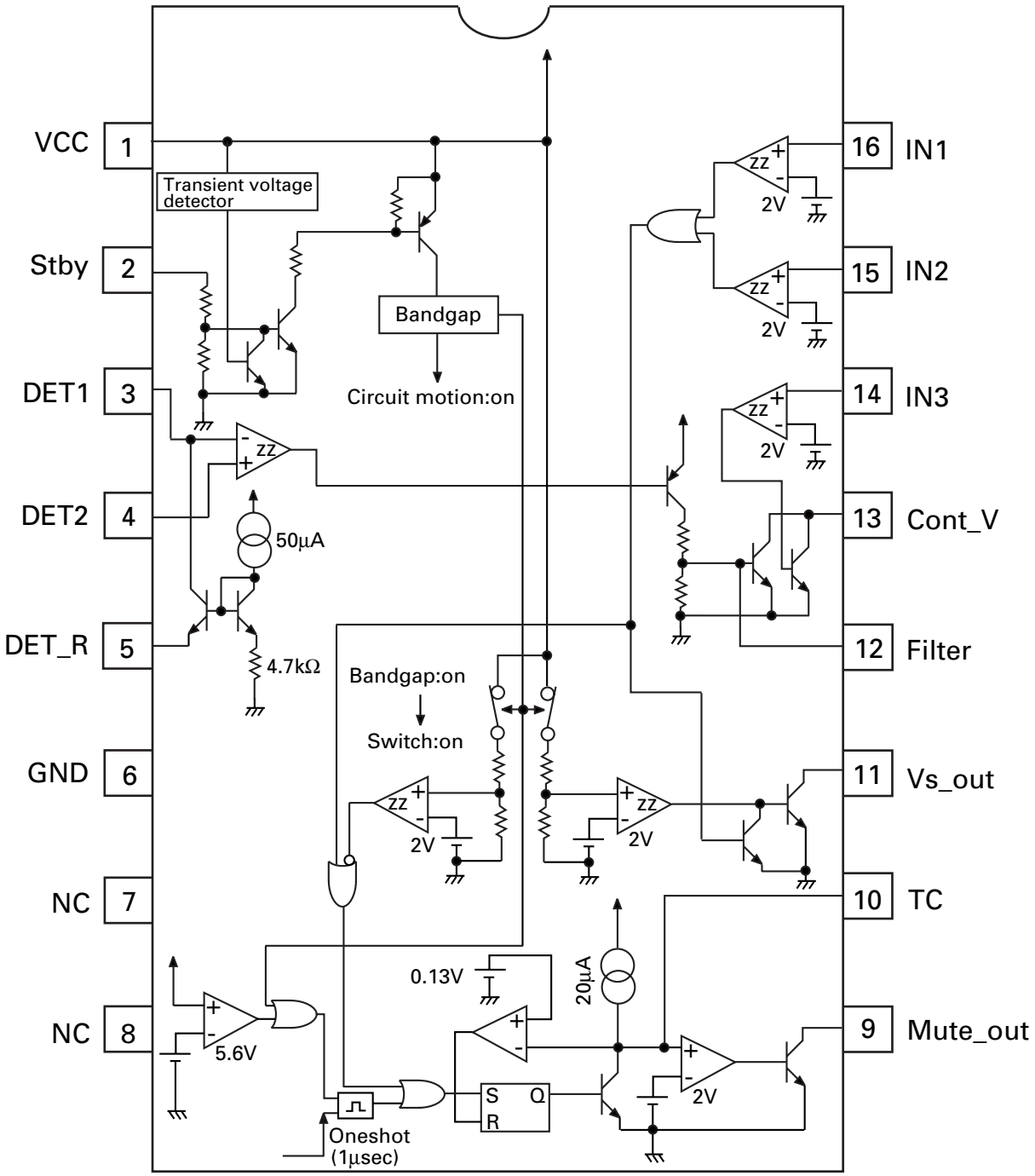
7.1 PARTS

7.1.1 IC

NJM2068L



PA2027A


VCC
1
Stby
2
DET1
3
DET2
4
DET_R
5
GND
6
NC
7
NC
8
16
IN1
15
IN2
14
IN3
13
Cont_V
12
Filter
11
Vs_out
10
TC
9
Mute_out
Transient voltage detector
Bandgap
Circuit motion:on
50µA
4.7kΩ
Bandgap:on
Switch:on
2V
5.6V
0.13V
20µA
S
Q
R
Oneshot
(1µsec)

7.2 DIAGNOSIS

7.2.1 DISASSEMBLY

● Removing the Case(not shown)

1. Remove the nine screws.
2. Remove the Case.

● Removing the Panel Unit(not shown)

1. Remove the six screws.
2. Remove the two Panel Units.

● Removing the Amp Unit(Fig.1)

1 Remove the twelve screws.

2 Use 2 pcs. of screw and insert them into the two holes marked with an arrow. Alternately tighten them little by little until the Sub Heat Sink separates from the Heat Sink.

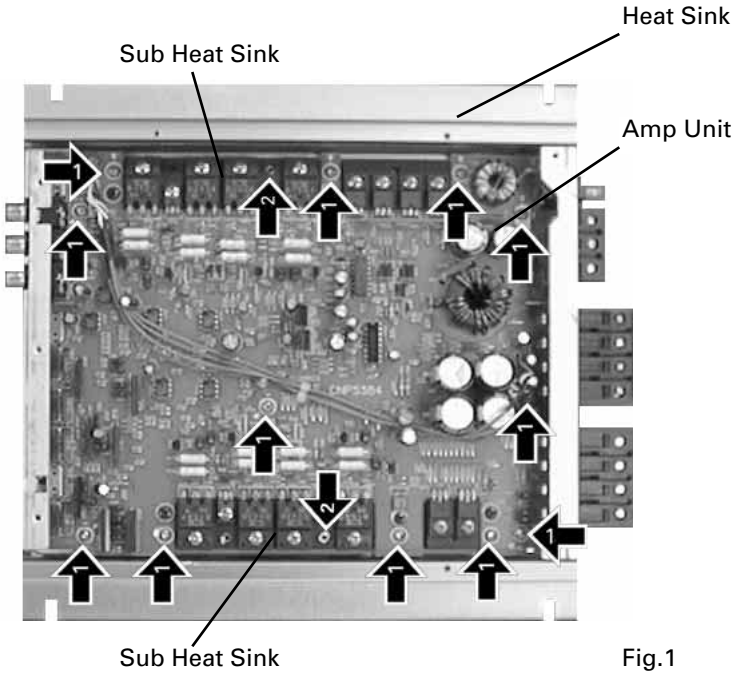


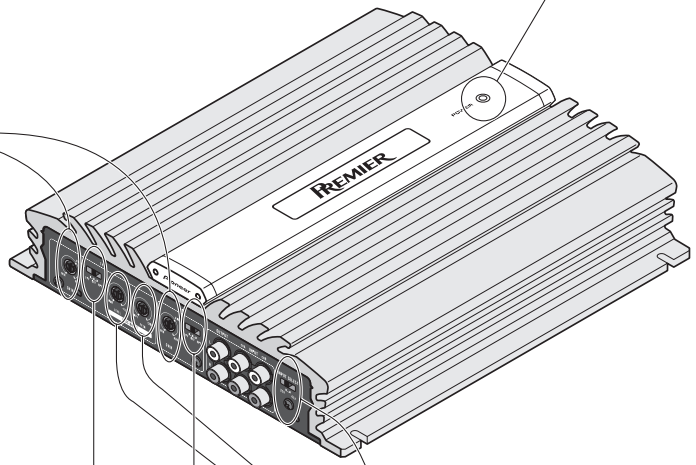
Fig.1

Setting the Unit

Gain Control

Adjusting the gain controls A and B will help match the output of the car stereo to the Pioneer amplifier. Normally, set the switch to the "NORMAL" position. If the output is low even when the volume of the car stereo is turned up, turn these controls clockwise. If there is distortion when the volume of the car stereo is turned up, turn these controls counter-clockwise.

- If you only use one input plug, set the gain controls for speaker outputs A and B to the same position.
- When using with an RCA equipped car stereo (standard output of 500 mV), set to the NORMAL position. When using with an RCA equipped Pioneer car stereo with max. output of 4 V or more, set to the MIN position.
- If you hear too much noise when using the speaker input terminals, turn the gain control counter-clockwise.



Power Indicator

The power indicator lights when the power is switched on.

Input Select Switch

For two-channel input, slide this switch to the left. For four-channel input, slide this switch to the right.

LPF (Low-Pass Filter)/HPF (High-Pass Filter) Select Switch

Set the LPF/HPF select switch as follows according to the type of the speaker that is connected to the speaker output connector and the car stereo system:

LPF/HPF Select Switch	Audio frequency range to be output	Speaker Type	Remarks
LPF (left)	Very-low-frequency range	Sub-woofer	Connect a sub-woofer.
OFF (center)	Full range	Full range	
HPF (right)	Low-frequency range to high-frequency range	Full range	If you want to cut the very-low-frequency range because it is not necessary for the speaker you use.

Speaker Out A: Bass Boost Level Control

Bass boost level control can boost the level around the frequency selected by the bass boost frequency control from 0 to 12 dB.

Speaker Out A: Bass Boost Frequency Control

You can select a bass boost frequency from 40 to 120 Hz with the bass boost control.

- Bass Boost Level Control, Bass Boost Frequency Control can be adjusted only when the LPF/HPF select switch is set to a position other than HPF.

Connecting the Unit

⚠ CAUTION

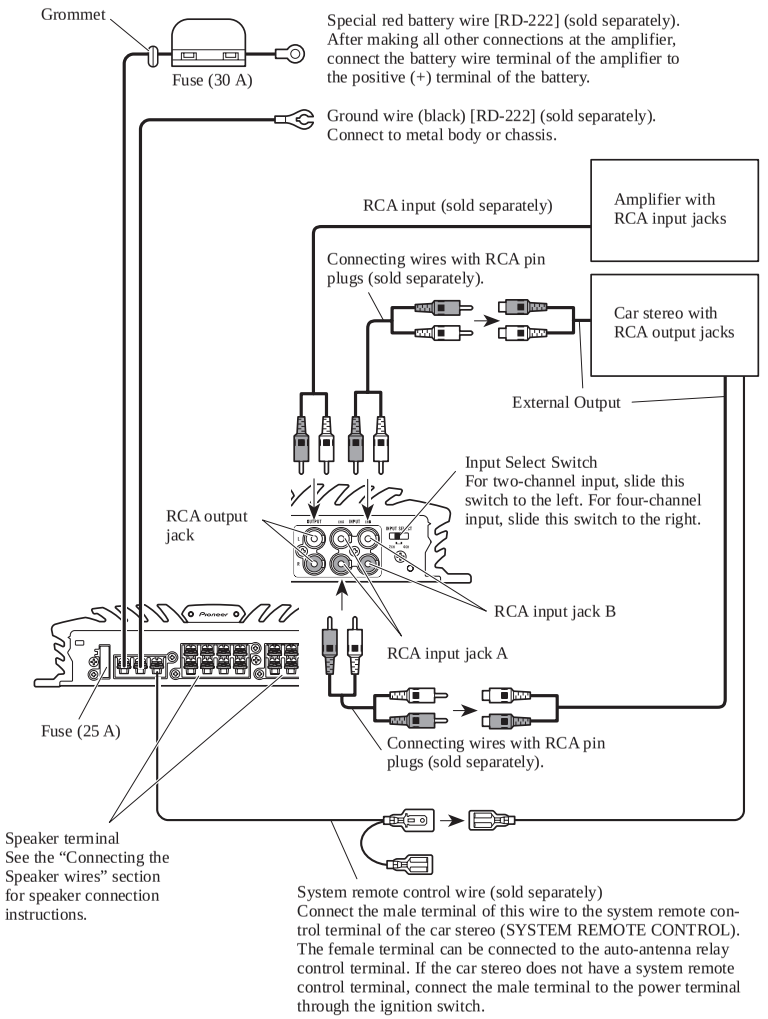
- Remove the negative (–) terminal of the battery to avoid the risk of short-circuit and damage to the unit.
- Secure the wiring with cable clamps or adhesive tape. To protect the wiring, wrap adhesive tape around them where they lie against metal parts.
- Do not route wires where they will get hot, for example where the heater will blow over them. If the insulation heats up, it may become damaged, resulting in a short-circuit through the vehicle body.
- Make sure that wires will not interfere with moving parts of the vehicle, such as the gearshift, handbrake or seat sliding mechanism.
- Do not shorten any wires. Otherwise the protection circuit may fail to work when it should.
- Never feed power to other equipment by cutting the insulation of the power supply wire to tap from the wire. The current capacity of the wire will be exceeded, causing overheating.

⊘ To prevent damage

- Do not ground the speaker wire directly or connect a negative (–) lead wire for several speakers.
- This unit is for vehicles with a 12-volt battery and negative grounding. Before installing it in a recreational vehicle, truck, or bus, check the battery voltage.
- If the car stereo is kept on for a long time while the engine is at rest or idling, the battery may go dead. Turn the car stereo off when the engine is at rest or idling.
- If the system remote control wire of the amplifier is connected to the power terminal through the ignition switch (12 V DC), the amplifier will always be on when the ignition is on— regardless of whether the car stereo is on or off. Because of this, the battery could go dead if the engine is at rest or idle.
- Install and route the sold separately battery wire as far away as possible from the speaker wires. Install and route the sold separately battery wire and ground wire, speaker wires, and the amplifier as far away as possible from the antenna, antenna cable and tuner.
- Speakers to be connected to the amplifier should conform with the standards listed below. Otherwise damage will occur to the speaker. The speaker impedance must be 1 to 8 ohms. (2 to 8 Ω for stereo, monaural and other bridge connections.)

Speaker Channel	Speaker Type	Power
Four-channel	Sub-woofer	Nominal input: Min. 30 W
	Other than sub-woofer	Max. input: Min. 60 W
Two-channel	Sub-woofer	Nominal input: Min. 70 W
	Other than sub-woofer	Max. input: Min. 140 W
Three-channel	Sub-woofer	Nominal input: Min. 70 W
Speaker output A	Other than sub-woofer	Max. input: Min. 140 W
Three-channel	Sub-woofer	Nominal input: Min. 30 W
Speaker output B	Other than sub-woofer	Max. input: Min. 60 W

Connection Diagram


Grommet
Fuse (30 A)
Special red battery wire [RD-222] (sold separately).
After making all other connections at the amplifier, connect the battery wire terminal of the amplifier to the positive (+) terminal of the battery.
Ground wire (black) [RD-222] (sold separately).
Connect to metal body or chassis.
RCA input (sold separately)
Amplifier with RCA input jacks
Connecting wires with RCA pin plugs (sold separately).
Car stereo with RCA output jacks
External Output
Input Select Switch
For two-channel input, slide this switch to the left. For four-channel input, slide this switch to the right.
RCA output jack
RCA input jack B
RCA input jack A
Fuse (25 A)
Connecting wires with RCA pin plugs (sold separately).
Speaker terminal
See the "Connecting the Speaker wires" section for speaker connection instructions.
System remote control wire (sold separately)
Connect the male terminal of this wire to the system remote control terminal of the car stereo (SYSTEM REMOTE CONTROL). The female terminal can be connected to the auto-antenna relay control terminal. If the car stereo does not have a system remote control terminal, connect the male terminal to the power terminal through the ignition switch.

8.2 SPECIFICATIONS

● GM-X434/X1R/UC, GM-X334/X1R/UC, GM-X334/X1R/EW, GM-X334/X1R/ES

Specifications

Power source	14.4 V DC (10.8 — 15.1 V allowable)
Grounding system	Negative type
Current consumption	18 A (at continuous power, 4 Ω)
Average current drawn*	5.5 A (4 Ω for four channels)
	10 A (4 Ω for two channels)
Fuse	25 A
Dimensions	217 (W) × 55 (H) × 250 (D) mm
	[8-1/2 (W) × 2-1/8 (H) × 9-7/8 (D) in]
Weight	3.0 kg (6.6 lbs) (Leads for wiring not included)
Maximum power output	60 W × 4 / 140 W × 2 (EIAJ)
Continuous power output	30 W × 4 (at 14.4 V, 4 Ω, 20 — 20,000 Hz, 0.08% THD)
	70 W × 2 (at 14.4 V, 4 Ω, 20 — 20,000 Hz, 0.8% THD)
	35 W × 4 (at 14.4 V, 2 Ω, 20 — 20,000 Hz, 0.8% THD)
Load impedance	4 Ω (1 — 8 Ω allowable)
	(Bridge connection: 2 — 8 Ω allowable)
Frequency response	10 — 45,000 Hz (+0 dB, –1 dB)
Signal-to-noise ratio	106 dB (IHF-A network)
Distortion	0.008% (2 W, 1 kHz)
Separation	65 dB (1 kHz)
Low pass filter	Cut off frequency: 80 Hz
	Cut off slope: –18 dB/oct
High pass filter	Cut off frequency: 80 Hz
	Cut off slope: –12 dB/oct
Bass boost	Frequency: 40 — 120 Hz
	Gain: 0 — 12 dB
Input level / impedance	RCA: 0.4 — 4.5 V/22 kΩ
	Speaker: 1.6 — 18 V/40 kΩ

Note:
- Specifications and the design are subject to possible modification without notice due to improvements.

***Average current drawn**
- The average current drawn is nearly the maximum current drawn by this unit when an audio signal is input. Use this value when working out total current drawn by multiple power amplifiers.